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THE FOUNDATIONS OF SOCIAL AND ECONOMIC LIFE IN EGYPT IN HELLENISTIC TIMES¹

BY PROFESSOR M. ROSTOVTZEFF

MANY years of close study of the history of the ancient world have convinced me that one of the most important epochs in the evolution of the world is the Hellenistic period, *i.e.* the three centuries after Alexander the Great. I am sure that, if we desire to understand the peculiarities of Greek genius and the subsequent history of civilization, this epoch is quite as important as the flourishing period of Greek politics and the time of the Roman world empire. I will not repeat well-known truths, but I must emphasize two cardinal points which even in such a brilliant home of classical learning as Oxford are apt to be insufficiently considered.

First of all an idea of the Greek world based only on a knowledge of the Athens and Greece of the VIth to the IVth century B.C. is both incomplete and to a great extent misleading. One of the most important features of Hellenism is not worthily represented in this picture of the Greek world, *i.e.* the universalism of Greek genius and its accessibility to mankind in general. This feature is most characteristic of the Hellenistic epoch. Let us not forget that this age created the world-wide Greek language—the *κοινή*. It also produced writers of genius who were as near to the Greeks themselves as to the Hellenized and Romanized *βάρβαροι*. They were equally read by the fellaheen of Egypt, by Hellenized Syrians, by citizens of the world capital—Rome—and by Romanized Gauls, Britons and Berbers. I would cite, for example, the name of Menander—the father of contemporary drama so far as this drama has developed on classical lines. The Hellenistic period first put the idea of a “cultured world,” *οἰκουμένη, οἰκουμενικός*, into general currency. For this cultured, *i.e.* Greek, world it created a world philosophy as represented by the schools of the Stoics and the Epicureans; the world learning, as represented by the works of the followers of Aristotle, the Alexandrian, Pergamene and afterwards Roman scholars; the world history as we find it in the great works of Ephorus and Polybius, Plutarch and the great Roman historians; finally the world literature. It is not fully realized that the greatest works of classical Greek literature obtained world-wide importance and a world-wide audience only through the great creative forces of the Hellenistic period. Due credit must be attributed to the creative power of that epoch which succeeded in spreading throughout the world the language, the habit of thought, and the culture of the Greeks. Such an epoch cannot be designated a period of decline. I take the liberty of affirming that people who know Athens and who are not thoroughly acquainted with Alexandria, Pergamon and Antioch do not know Greece. They cannot fully realize the exceptional work of Greek genius. Athens moulded everlasting specimens of beauty and thought. The Greeks of the Hellenistic period, continuing the work of the Athenians, made these specimens accessible to millions. They have handed them down to us and made it possible for us to establish on them, as a base, the foundations first of European, and now of our world culture.

¹ A lecture delivered before the Oxford Philological Society.

My second point is that without a proper conception of the great results achieved by the Hellenistic age in the domain of politics, economics and law we shall never adequately realize how the world empire of Rome developed. Without this knowledge we can never understand how the Roman Empire acquired the strength to enable it to exist throughout a series of centuries, and how it could afterwards provide modern European nations with a basis on which to found their political life. The Hellenistic age was the first to attempt to solve a fundamental problem of ancient political life, a problem which still remains unsolved two thousand years after the death of Alexander the Great.

The ancient world produced two types of state—the great monarchical and bureaucratic organization of the Orient, and the free, autonomous and democratic organization of the Greek city state. The Eastern state seemed to be quite incompatible with that of the Greek. The foundations of the Eastern state were a strong central power, an army of appointed, responsible officials, the blind obedience of the population, a tendency to make private property serve the interests of the State, and a desire to socialize and nationalize production. All these points seem to be incompatible with the economic and political bases of the Greek constitution, which comprised an annually elected central power remaining under the control of the people, an administrative organization on the basis of elective self-administration, an almost unlimited freedom of private initiative in economic life, and private property as the chief economic principle. It is well known that the Greek πόλις was powerless to unite the whole Greek nation into one concrete state. It was therefore obliged to submit to the old monarchical state system of the East, and to adapt the fundamental principles of its life to the bureaucratic organization of the Orient. The whole history of the Hellenistic period consists of slow and varied processes of fusion between the two principal forms of ancient political, economic, and social life. The Greek city states were gradually incorporated in the big monarchies of the East, infusing new forces into decrepit bureaucratic organizations. First of all, Greek genius supplied much constructive power in the building up of the Eastern political and economic system. It evolved a strictly thought out and carefully regulated bureaucratic system of a Greek monarchic state on an Eastern basis. The corner-stone of this system was the submission of the individual to the State in all spheres of his activity. This was the case in Ptolemaic Egypt. In other countries, such as Macedonia, Asia Minor and Syria, this same Greek genius tried to create a compromise between the Eastern monarchy and Greek polity. It started to build up a monarchic state as a conglomeration of Greek city states which preserved the basis of their economic and social life. They lost, however, their economic self-sufficiency (*αὐτάρκεια*) and their political autonomy (*αὐτονομία*). This gigantic, strenuous and exciting work was carried out in an atmosphere of continuous internal unrest and endless wars between the different Hellenistic states.

Rome inherited this work, and the Roman Empire attempted to unite its various threads and bring it to completion. An attempt by Rome to construct its world state by means of an alliance of various Italic city states in the IIIrd and IIInd centuries B.C. brought forth no good results. A second attempt by Rome to revive the Athenian world power—to organize a world state founded upon a monarchical hegemony of the Roman citizens—met with the same fate. This second attempt resulted in endless civil wars, bloody revolutions and finally in the consolidation of a monarchical régime. This régime eventually was obliged to follow the example of the Hellenistic monarchies, and to continue, not without much trepidation and deviation, the work of combining the principles of the

Greek city state and the Eastern bureaucratic monarchy. Rome, however, as we are aware, did not bring this work to completion, nor has it been completed up to the present time. I do not know which elements prevail in *our* contemporary state—the elements of the Greek city state or of the Eastern bureaucracy. I can, however, affirm that the various stages of development in these processes in the ancient world are not as well known to us as they should be. This is certainly not due to lack of material, but more to the absence of systematic thought and study of this question. The specialists in Oriental history have applied all their powers to the reading and translating of Eastern documents and afterwards to the reconstruction of the political and dynastic history of the different Eastern states. Little attention has been paid to social and economic history. The specialists in the history of the Hellenistic period, in which nobody before Niebuhr and Droysen was interested, had also first of all to make known and explain the raw material, *i.e.* inscriptions and papyri. Afterwards they began to elucidate the fundamental problems of political history, to frame a satisfactory chronology, and to find their way through the chaos of fragments of lost historical works on the evolution of the Hellenistic world. They had no time to study the social and economic questions. Nevertheless in the history of the Hellenistic age, thanks to the efforts of the papyrologists, something has been accomplished. The economic, social and political structure of Ptolemaic Egypt has become more and more clear.

I have devoted the greater part of my life as a student to the elucidation of these questions, and have endeavoured to portray not only one land and one epoch, but to demonstrate on the one hand the dependence of Hellenistic culture on Greek institutions, and on the other the enormous influence of Hellenistic activity on the Roman Empire. It is impossible to give the outlines of my work in a short paper, but I would like to throw some light on a small part of the picture. Through the kindness of Prof. B. P. Grenfell I have been enabled to acquaint myself with the contents of a most valuable document which supplies much new evidence for the history of Ptolemaic Egypt. This consists of instructions from a minister of finance of (probably) King Ptolemy Euergetes I to one of the important financial officials of Egypt—the financial chief of one of the Egyptian *νομοί*. This document is unique of its kind; it is Greek in both language and thought, but purely Egyptian in character and contents, corresponding closely to the famous instruction of Tuthmosis III to his Grand Vizier Rekhmerê. This document has been read and restored in Grenfell's masterly style. In dealing with it I have examined again all the principal questions relative to the economic and social life of Egypt in the IIIrd century B.C. and have come to some new conclusions. Let me give you some idea of the way in which I arrived at them. You will see that the picture of Egypt during that period is not only interesting in itself but also very modern.

The economic life of Egypt is entirely built up on the exploitation of the productive forces of the Egyptian soil. It was only rendered possible by means of a skilful regulation of the water supply in combination with the annual inundation of the Nile. The products of the Egyptian soil watered by the Nile were always the most important source of Egyptian wealth. The foodstuffs, consisting mainly of cereals and oils, were consumed by the population, while millions of cattle both for work and slaughter, as well as domestic fowls, were fed in the rich pastures of the country. Linen and wool were used in the manufacture of clothes for rich and poor, for living and dead. All supplies over and above the needs of the population were exported. Egypt bought little abroad; what she lacked included wood for ship-building and metals, especially iron. She always attempted from the earliest times to hold Syria, and, beginning with the Ptolemaic dynasty, Asia Minor, in

order to provide herself with these products. In comparison with the products of the Egyptian soil other products play but little part in Egyptian economic life. Besides bread, meat and oil, the fish of the Nile occupied a very secondary position. Trading and hunting expeditions to Central Africa and Arabia brought home ivory, precious stones, gold, valuable and rare woods, and various perfumes, all of which supplied the raw materials for the different branches of industry and art in the large towns of Egypt, especially Alexandria. The abundant growth of papyrus in the Nile Delta supplied the important paper factories, while both coloured and uncoloured glass were produced in great quantities.

Such were the material resources of Egypt. How were they utilized? In direct opposition to the structure of economic life in Greece and Italy, the whole economic organization of Egypt was built up on the principle of centralization and control by the Government, as well as the nationalization of all production in agricultural and industrial life. Everything was for the State and through the State, nothing for the individual, except the mere possibility of a grey existence which saved the worker from starvation. Nowhere in the whole evolution of mankind can be found so far-reaching and so systematic limitations as those which applied to private property in Ptolemaic Egypt. I do not know how far this state of affairs existed in Pharaonic Egypt, but it is clear that the system reached its logical completion under the Ptolemies. They gave it the finishing touches by causing it to be elaborated by the Greek genius and Greek systematic and logical thought.

There is no evidence for the supposition that the national economy of pre-Greek Egypt was constructed on the basis of one clearly thought-out legal idea. Political conditions, religious ideas and administrative practice created a varied and changing picture. Its most important feature was a more or less far-reaching concession by the State of the rights of sovereignty to various influential corporations and persons, chiefly to the temples and powerful officials of a feudal type. This feature gives to the structure of pre-Ptolemaic Egypt a more or less clearly defined feudal character, which was more strongly marked in times when the central authority was weak, and less clearly defined during the rule of strong monarchs and dynasties. From the beginning of their rule in Egypt the Ptolemies adopted a decisive line of policy in combating the elements which weakened and disintegrated the central authority. They appropriated a politico-religious principle which had ever been the basis of the Egyptian state. The substance of this principle was that the king alone held absolute power and unlimited rights of disposal over the material resources of the country as a whole, and the wealth of individuals in particular. On this system of "divine right" the Ptolemies founded their administrative, social, and economic policy. They elaborated it in detail and constrained the feudal element in Egypt, especially the temples and the priesthood, to obey it. We are not aware to what extent they adopted the old system, or how many new elements they introduced into it, nor do we know the extent of the changes brought about by the Greeks in Egyptian theory and practice. But it is certain that the Ptolemaic system had as its core not Greek but Egyptian ideas—not Greek but Egyptian practice. The task of the Greeks in Egypt was to formulate Egyptian ideas clearly, to think them out and to adapt the Egyptian practice to the aims of the Ptolemaic state. Not less important was the task of making the Egyptian system acceptable to the new Greek population of the country.

The basis of the economic organisation of the Ptolemaic state was the principle of

supreme management by the Government. This principle embodies at the outset the idea that the king was the proprietor of the whole territory of Egypt and could dispose of its resources, including mines, lakes and rivers. Further it established the king's right to make use of civil labour if the needs of the State demanded it. The whole practice of Ptolemaic administration was built up on these two principles. I have no grounds for disbelieving that these were purely theoretical principles. I feel sure that they formed the basis of the whole economic policy of the Ptolemies. Deviation from them was both possible and natural, but it in no wise alters them in substance. In the majority of cases such deviations were survivals or new formations arising out of Greek influences.

The fullest expression of these principles was to be found in the *agricultural life* of the country. All the arable land in Egypt was meticulously registered, and was under the strictest control of the Government. One part of it was under the direct management of the State (*γῆ βασιλική*, crown land), while different corporations and private individuals were granted possession of the other part (*γῆ ἐν ἀφέσει*). In this case, however, the State granted concessions only in order to serve its own purposes. In order to provide the temples with means wherewith to maintain the cult of the gods and the king, the State allowed the priesthood to dispose of the income derived from certain lands (*γῆ ἱερά*, sacred land). Land was also granted by the Government to Greek gymnasia to finance education for Greek youths. Soldiers and officials were given land in order to ensure the defence of the country and its good administration (*γῆ κληρουχική*, *γῆ ἐν συντάξει*). Large concessions of territory were assigned to officials of importance, and to friends of the sovereign (*γῆ ἐν δωρεᾷ*). A separate category was formed by land granted to individuals for continuous or sometimes perpetual use, the reasons being that this was the only method of getting such land cultivated, and it was necessary for the holders to lay out some capital on it, and to expend a certain amount of initiative and intensive personal labour on it. From the Greek point of view such land most nearly corresponded to the Greek idea of private landed property (*γῆ ιδιόκτητος*). I include in the same category gardens and vineyards, as well as sites for building purposes. The Greeks in Egypt regarded such land as private property (*κτήμα*). It is possible that in other parts of Egypt (our evidence is mainly based on documents found in Fayûm) modifications existed in regard to the right of land-tenure which were more or less consonant with the Greek idea of private property. But these do not materially affect the substance of the question.

Statistics do not assist us in determining the respective dimensions of crown and private land in Egypt, but in the Fayûm, without doubt, crown lands predominated. If we add the sacred land and the land *ἐν δωρεᾷ* to that of the crown (as the principle of the management of both was identical), we may deduce with comparative certitude that in the Fayûm private land was the exception. I am of opinion that the same conditions prevailed in other parts of Egypt, especially in the extremely fertile Delta—the granary of the whole country. It is possible that the order of things in the district of Thebais was different. Here the sacred lands may have predominated, and it is credible that the exploitation of them was in some measure dissimilar to existing conditions in the north.

In general the mode of exploitation of crown lands was typical of Egypt. These methods set the tone and defined the social and economic status of the majority of the agricultural population. It is highly interesting to note that the Ptolemies, by means of a series of measures both administrative and legal, fixed the relationship between the

State and the crown-farmers in a strictly regulated semi-Greek form, and this without any departure from the old customs which prevailed among the agricultural population.

The chief features of this system were :

(1) From a legal standpoint the relations between the State and the agriculturist were regulated by the laws which applied to leasehold property, which might be held for a definite short period or for an indefinite long one.

(2) *De facto*, however, the position of the farmer was complicated in two ways : (a) he was bound to remain at his place of registration (*ιδία*), and was obliged to cultivate and sow his land, to gather, transport and thresh his corn, and (b) the State was not *de facto* bound by its contract with the farmer ; it could at any time dismiss one farmer and replace him by another.

(3) The State recognized as private property of the farmer both his residence and agricultural implements. *De facto*, however, in contradiction to this principle, the State sometimes sold all such property for arrears of rent and taxes.

(4) Cattle were not absolute private property, since they could be requisitioned in case of need by the State.

(5) Compulsory services were demanded from the farmer not only for the execution of his regular agricultural work, but also for the regulation of the economic life of the country at large, *e.g.* for keeping in repair canals and banks, for transporting Government property, etc.

If we take all this into consideration, we must admit that the farmers, while *de jure* free, were *de facto* bound to the soil ; for while they were theoretically leaseholders, they were actually precarious possessors. This state of serfdom is shown more clearly by the following facts. In his domestic economy the farmer was not by any means free ; he could not make his plans in accordance with his own desires. He received an annual order as to how much of his land he should sow and with what seed. He had no rights in the disposal of the fruits of his labour. The corn he grew was only his after the State had received its quota, *i.e.* the rent and the various taxes calculated in money or in produce. The State only released him from further liabilities, and allowed him to dispose of the residue of his produce, after payment of the full amount demanded of him and the transportation of such produce as was owned by the State to the Government granaries. But even this freedom of possession was not unlimited. The State still claimed the right to purchase a certain amount of corn at a fixed rate. The same rule applied not only to crown-farmers but also to the holders of private land. No freedom at all was permitted to agriculturists in disposing of products of special kinds ; for instance, all the crops yielding oil fell into the hands of the State at a fixed price, and the same procedure was adopted with flax and perhaps hemp, and possibly with wool also. The agriculturist could not make use of green food for his cattle as he wished (such green fodder was sown after the harvest had been gathered, as is the case in Egypt to-day). He could only feed his own draught-cattle with this green fodder on condition of payment of certain taxes to the Government, which secured such payment by means of pledges. The remaining grass was claimed by the State, which was also the proprietor of all uncultivated pasture-land and meadows. Under these conditions every farmer, whether he owned some hundred head of cattle or only a few sheep and goats, was completely dependent on the State, and was obliged to pay heavy taxes in order to feed his live-stock. The Government was careful to register all animals

and in this way was subsequently able to regulate the development of cattle-breeding in the same manner as it controlled agriculture.

Compulsory labour constituted a heavy burden for the agricultural population, who year by year worked on the canals in order to keep them in repair. This labour devolved upon the crown-farmers chiefly, but legally all the other categories of the agricultural and non-agricultural population were liable to take part in its execution. Of course, in view of their high social standing, soldiers, officials and Greeks in general did not perform such labour personally, but had to pay an equivalent tax. Obligatory work on the canals consisted not only in digging, but also in the provision of timber for their banks. Timber is scarce in Egypt, and the Government displayed great foresight in planting the banks with trees noted for their rapid growth. The obligation to plant, fell, and prepare this timber devolved upon the agricultural population. From time to time the Government had recourse to compulsory labour for cultivating and sowing the fields and for gathering the harvest. This happened when, from some cause or other, land had been left unsown or the harvest had not been gathered. In such cases the Government never differentiated between the social grades of agricultural labour.

It can therefore be clearly seen how far-reaching was the compulsory system, and to what extent freedom and independence in agricultural labour were curtailed. We are not dealing with haphazard methods, but with an elaborated and fully thought-out system.

The chief points of this system were as follows:

- (1) The binding of a great part of the agricultural population to their work at their place of residence.
- (2) Control of the domestic economy of all individual members of the State.
- (3) The State's claim to the largest share in production.
- (4) Utilization to the fullest extent of manual and animal labour for the State.
- (5) A tendency to limit the rights of the agricultural population over its private property.

The same system was adopted by the Ptolemaic state for the control of all branches of industrial and commercial activity, and for the organization of taxation. Time does not allow of my dealing as fully with this subject as I have done with Egyptian agriculture. I must confine myself to a few remarks of a general character, which are based on a long and careful examination of Greek papyri.

I. The whole of industry, internal commerce, and organized taxation was always either under the control of the State or under its direct management. Here again the Government abolished independence and freedom of action among the priesthood and feudal lords.

II. The Ptolemies were the first to elaborate a universal and well thought-out state-system for the organization of industry, internal trade and taxation. The most characteristic features of this system are as follows:

- (a) Industry and trades were placed under strict control and accurate registration.
- (b) The most important branches of industry, such as the production of oils, textiles and paper, the working of mines and quarries, were regulated with particular minuteness. For some of these branches the Ptolemies created a monopoly in production and trade,

while for others they devised milder measures for the maintenance of control and the concentration of trade in the hands of the State.

(c) The less important branches of industry were more independent; but they were all heavily taxed and raw materials could not be purchased freely, since practically all of them were owned by the State. The right of sale was also limited.

(d) In the most important industries, we discover the same system of compulsory labour as has been described in my remarks on the conditions applying to agricultural life.

(e) Inspection of trades, industries, and taxes did not belong exclusively to officials and the police, as was the case in agricultural life. This task was divided between officials and tax-farmers. The Greek form of free state tax-farming was fully subordinated by the Ptolemies to the State. Being in Greece a free commercial operation, tax-farming became under the Ptolemies a form of state-control of industry and taxation. The tax-farmers, together with civil servants, formed a second line of people who were answerable to the State, and in the event of their not rendering its dues were liable to have their private property and the property of their sureties confiscated.

(f) The greater part of Egyptian trade was not managed by free merchants, but by agents appointed by the State who sold the goods at fixed prices, and these agents were responsible to the Government in the same way as the tax-farmers. Like the latter, they received only a percentage of the revenue.

(g) We are unable to find any traces of independent trading in Egypt. Most of the commodities were provided by the State and were sold at fixed prices. In some cases fixed rates were not used, but the State created a few inspectors—generally tax-farmers who levied a certain percentage on trade returns.

(h) A very important innovation by the Ptolemies was the abolition of the system of natural economy and bartering, and the introduction of money payments into the domain of trade, industry, and taxation. It is not necessary to point out that the coinage was an exclusive monopoly of the king, as well as the trade in precious metals, gold and silver.

All the foregoing points involved the Government in the task of setting up elaborate machinery for securing the fulfilment of the duties of the population towards the State. First of all it became necessary to create a large number of police officials. They were the so-called guards (*φύλακες*), who probably totalled many thousands, part of them being an organized military force, while the majority were drawn from the local population and compelled to serve. As their duties involved material responsibilities, they were taken from the ranks of the wealthier portion of the population, and in order to secure respect for their authority they were generally selected from the senior ranks of the community. As their duties were detested and frequently brought men to financial ruin, every one tried to avoid this service. The Government was therefore obliged to make this service compulsory. Indeed, compulsory service was a characteristic feature of the Ptolemaic system. In the earlier periods of its existence this compulsory service was confined to the lower ranks of the police officials, but it is obvious that such a system was necessarily rapidly extended. The compulsory service of these officials was sometimes termed by the Egyptian Greeks *λειτουργία*; but with the classical Greek term, which implied a voluntary sacrifice of a man's property and labour for the good of the State, the Ptolemaic "liturgy" had nothing in common. It originated in the purely Oriental idea of serfdom (*corvée*): only the word

was borrowed from Greece by the Ptolemies. In substance it was a form of compulsory labour largely used by the Ptolemies.

Above this local police there was a formidable army of officials; but this is not the place to enter into a discussion of these functionaries. I would only refer to two conspicuous facts.

Firstly, the Ptolemies were the originators of an elaborate official *system*. They created a graduated scale of lower and higher ranks all appointed by the king or his delegates and responsible to the king exclusively. This system was thought out in minute detail. The idea of this salaried "official" army had its birth in the Orient, but the Greeks, and especially those of Egypt, were the first to elaborate it.

The second point is that the Ptolemies were the first to demand securities from their officials. The officials whose duties were to collect produce and money taxes and to control the tax-farmers were obliged to pay the State, if arrears were not fully exacted by them from the tax-farmers and tax-payers. In case of insolvency their estates and the guarantees of their sureties were confiscated. This innovation was very important, for it showed future generations how to divert the private property of the tax-farmers and officials into the State treasury.

These officials, together with the tax-farmers, formed of course a privileged class. Sometimes they became very rich, and by bribing the higher officials they steered their course through a sea of official correspondence with some degree of safety. One false manoeuvre, however, and their vessel was wrecked. As has already been pointed out, all officials were responsible to the Treasury, and for them to keep their affairs in absolutely correct order was practically unthinkable. So it is easily imagined that side by side with the lucky few there were many unfortunates. Besides those who enriched themselves there were many who became beggars. It is worthy of note that in the ranks of this red-tape army very few honest men were to be found. And these belonged almost exclusively to the category of "unlucky" ones.

If it is asked how many of the population, either civil or official, were out of reach of the State's economic control, the answer presents no difficulties. They were not to be discovered among the agricultural population, nor were they to be found in the industrial and commercial classes. Furthermore they were absent in the ranks of the army, navy, officials, and tax-farmers. There remained three categories—two economic, *i.e.* the dealers occupied (1) in external trade and (2) in transport; and one political—the citizens of the Greek towns Naucratis, Alexandria and Ptolemais.

Let us examine the last category. Their political freedom and autonomy were mere shadows. What were the limits of their economic freedom is unknown; but I am of the opinion that, if we take into consideration the direct connection of their economic life with that of the remainder of Egypt, we have no grounds for the supposition that they occupied an exceptional position as regards the State.

Very little evidence is available as to the organization of external commerce. The fact that the Alexandrian traders (*ἐμπόροι* and *ἐγδοχείς*) were to be found in all harbours and ports of the world supplies no evidence as to their relation to the State. But taking into consideration the fact that the organization of external trade was more an international than an internal matter, we may conjecture that the Ptolemies conceded more independence and initiative to those engaged in the export and import operations of the country. It is, however, hardly possible that they enjoyed the same freedom of action in the interior.

The whole organization of Egyptian economic life points to the fact that they mostly exported goods which were owned by the State and imported goods for it.

The foregoing applies with equal force to the supply of transport within the country. Although it was managed by private dealers, the greater part of it was obliged to serve the needs of the State, the requirements of private individuals being subsidiary. The position, therefore, of the dealers in transport both on land, by means of donkeys, camels, and horses, and on the river (*ναύκληροι*) was practically the same as that of the tax-farmers who worked for the State or of the owners of small textile factories.

If my conclusions are correct, we may evolve a very instructive general picture of the economic and social condition of Ptolemaic Egypt. For the first time we meet with a broad and systematic plan for the nationalization of the whole economic life of a country. What were the results of this experiment? The State, of course, became greatly enriched by this system. Egypt, as compared with the other Hellenistic States, or even with Rome, was always the most opulent. The Ptolemies were the world's bankers, and they were well able to use their financial power. But this power was only one-sided. Money could purchase an army or a fleet, it could build up a beautiful capital with luxurious buildings and gardens, with money the Ptolemies could organize splendid ceremonies and festivals; but money alone could not create lasting power. The spirit of the nation was one of indifference—the dull obedience of serfs who possessed no initiative, no animation, and no patriotism, whose thoughts were wholly concentrated on the problems of their daily bread and economic interests. To this mood of the masses, who were conquered by the Greeks, the Ptolemies brought little by little the Greek conquerors themselves. Greek soldiers who had become semi-independent agriculturists were already losing their energy in the second generation, and were gradually and unconsciously assuming the spirit of those whom they had vanquished. The Greek officials became submerged in a mire of bureaucracy and bribery. Semi-stoical circulars, full of mild persuasions or even open threats, were by no means effective in causing these officials to discharge their duties to the State in a disinterested manner. The Greek traders and dealers found no room for private initiative, and eventually became officials and assumed the official habit of mind. Serfdom lay heavy upon the people, but protests were seldom heard. Dissatisfaction assumed a form typical among serfs. When they found that conditions were no longer tolerable, groups of men, agriculturists, workmen, sailors, or officials, said "We can bear no more" and fled to the temples to claim the protection of the gods, or disappeared in the swamps of the Delta. From the commencement of the IIIrd century B.C. these strikes were of common occurrence. They were a constant terror to the officials, since force was useless in dealing with a psychology born of dull despair. The government was rich in money, but the country was poor in spirit, and hardly knew happiness. True, the country occasionally revolted, under the banners of the old gods and temples or under the influence of national feeling. But these insurrections invariably ended in massacres, and only when the energetic elements in them had been destroyed was an amnesty granted to the survivors.

Nevertheless, the achievements of the Ptolemies in Egypt had very great influence on the future. By Greek thought and Greek talent for organization they systematized the shapeless foundations of the Eastern, and especially the Egyptian, state. The structure which they built up furnished valuable data for all those who afterwards sought for suitable methods to create a rich and powerful state in a *milieu* where no competition existed and where autocratic government was supreme. The Ptolemaic system was at first continued

by the Roman Emperors. As time went on, however, they adapted this system to the great organization of the Roman Empire, although not without some waverings and deviations. "All for the State and by means of the State" became their maxim also; and we see how some of the peculiarities of the political, social, and economic organizations of Egypt were organically developed in Rome. Where there had formerly existed free landowners, there gradually appeared "coloni." Free craftsmen and tradesmen were changed into corporations serving the State, and transport was centralized in the hands of State-organized *naucleri*. For powerful *publicani* were substituted strongly controlled tax-farmers of the Ptolemaic kind. The administration of the free cities was given over to groups of *decuriones* responsible for the payment of tribute and taxes by the population. The citizen army was replaced by a hired army which was gradually bound to the land, etc., etc.

We know that all these processes were on the one hand the cause and on the other the symptom of the steady decline which Roman civilization experienced in its vital powers and in its creative energy. But we also know that these processes connected with Egypt form only one side of the picture; not everywhere has Hellenistic influence displayed the same features as it did in Egypt. It was multiform and complex, and other forms of Hellenistic influence affected the Roman world just as strongly as this Egyptian form; and these other forms prevented downfall and decay.

The ideas of the ancient world penetrated the new European nations which were the descendants of the Roman provinces. Ancient culture was the prototype of the new European culture, and some centuries afterwards the same questions which the ancient world had proved incapable of deciding were again propounded: "does the individual exist for the State, or does the State exist to assure for the individual the free development of his creative powers?"

NOTES AND REFERENCES

Few modern historians have attempted to give a general picture of social and economic life in Egypt during the three centuries of the rule of the Ptolemies. But these attempts are mostly insufficient for different reasons. One of the best works on the economic and social structure of Ptolemaic Egypt—the well-known *Recherches sur l'économie politique*, etc. of Lumbroso—was published at a time when but little papyrological material was available. The last attempts to summarize the data of the papyri—the most valuable book of Bouché-Leclercq, *Histoire des Lagides*, vols. III and IV, and the Introductions to Papyrology by H. Wilcken (*Grundzüge der Papyruskunde*, 1912) and W. Schubart (*Einführung in die Papyruskunde*, 1918)—important as they are, have treated the economic question as one of many problems presented by the papyri, and have not concentrated their attention on the leading ideas of the Ptolemies¹.

Valuable work has been done to elucidate different special points. I refer to the works of Lumbroso, J. Maspero, Jouguet, Lesquier, Martin, P. Meyer, W. Otto, Oertel, Fitzler, Reil, Chwostoff and to the introductions and commentaries in the recent publications of papyri, first of all to the masterly elucidations of different problems by Grenfell, Hunt, Johnson, Jouguet, Lesquier, Wilcken, Schubart, P. Meyer, Vitelli, Comparetti, etc. Some of the commentaries by Grenfell (*e.g.* to the *Revenue Laws of Ptolemy Philadelphus* and to the volumes of Tebtynis and Hibeh papyri) represent an exhaustive treatment of different economic problems and have as much importance as many of the above-named special works. I myself have endeavoured to deal with many different points in the domain of the economics of Greek and Roman Egypt, *e.g.* with the tax-farming, agriculture, transport, corn-supply, etc. But I have never before

¹ The same must be said about the sketches by Beloch (*Griech. Gesch.* v. III), Cavaignac (*Hist. de l'antiquité*, v. III), A. Reinach and P. Jouguet, *L'hellénisation du Monde antique* (Paris 1914), pp. 212 foll. and pp. 309 foll. Better and fuller is the treatment of the subject by W. Scott Ferguson, *Greek Imperialism* (1913), pp. 149 foll.

attempted to express my general views on the social and economic evolution of Egypt during the period of Greek and Roman rule.

That is the reason why I have tried in the text of my article to sketch the general background of Egyptian economic and social life in the time of the Ptolemies. I am fully aware that this attempt is liable to be obsolete a few months after its publication. It is to be expected that now peace is with us, the papyrologists will give us one important publication of new papyri after another. A new edition of the older publications of Ptolemaic papyri was expected before the war from H. Wilcken, and it is to be hoped that his work did not cease during the war. Everyone knows how full of sound ideas and new suggestions all the publications of Wilcken are. Nevertheless the task which I undertook seemed to me not useless. My generalizations may be perhaps too far-reaching, my picture too definite and too precise, my explanations of the fragmentary materials partly wrong, but doubtless every attempt to outline the general features of a complex epoch, if based on a careful first-hand study of the whole available materials, has its value. It clears the sometimes confused ideas of special inquirers and editors of fresh materials, evokes controversy, and brings many questions of detail to reasonable solution.

In these few notes and references I do not endeavour to give the full evidence for every point and question. A long enumeration of numbers and titles would be mostly useless, since the principal references under each head may be found without difficulty in the works of Bouché-Leclercq, Wilcken and Schubart mentioned above. I will discuss only a few points giving the fundamental evidence. The points which I have chosen are either those in which my views radically differ from the generally accepted ones, or those which are based on new evidence not available to the above-mentioned scholars. Where my statements are based on the new Tebtynis papyrus I shall not give the text of the papyrus and the parallels to it, but only refer to the papyrus in general. The text of the papyrus and the whole material to explain it will soon be published in vol. III of the Tebtynis papyri.

1. The first point is the question as to the *general aims* of the Ptolemies in their work in Egypt. Wilcken considered, and Schubart agreed with him, that the Ptolemies pursued a world-policy, that for them the Mediterranean was the chief point and Egypt was only a base supplying the economic foundation of their Mediterranean policy. I must confess that my point of view is diametrically opposed to that of Wilcken. The difference between the Ptolemies and the Seleucids lies to my mind just in their attitude towards the idea of a world-state. The Ptolemies never did pursue the idea of creating a world-state based on Egypt. Their leading idea was to create a powerful Egyptian state, rich and strong enough to be independent and secure from every attempt to conquer it from the outside. In order to guarantee the safety of Egypt the first condition was to hold the sea, to command the sea-routes approaching Egypt. The task was complicated and difficult. In the times of the Old, Middle and New Empire in Egypt the possession of the Syrian coast was enough to give the needed guarantees. But beginning with the first millennium B.C. the growth of Asia Minor and the steadily developing sea-power of the Greeks induced the rulers of Egypt to extend the sphere of their political influence to the whole Mediterranean region, not in order to conquer and rule Greece and Asia Minor, but with the object of watching carefully the rival sea-powers and checking their efforts to cut Egypt off from the main sea-routes leading to her north and east coasts. This command of the sea-routes was unobtainable without a strong fleet, and a strong fleet could not be built and maintained by the natural resources of Egypt. Wood and metals had to be imported from outside, and the best way to secure a safe supply of these was to hold some countries which were rich in forests and mines. That is why Egypt held firmly on to Sinai, Syria, and Cyprus, and tried to occupy some districts in Asia Minor, chiefly in Lycia.

On the other hand the strength and wealth of the Egyptian state depended entirely upon regular foreign commerce. To hire armies and to maintain a strong fleet great stores of money were needed. The only way to obtain large quantities of gold and silver was through an extensive foreign trade. And to carry on this trade it was necessary to command the trade-routes.

The complicated task of defending the safety and independence of Egypt, which rendered necessary a permanent army and a strong fleet, led directly to the internal economic policy of the Ptolemies. It was impossible to transform Egypt into a Greek country with free and autonomous cities and at the same time to maintain the strength of Egypt as a united state. The only course was to uphold the old system of administration and the old social conditions, but at the same time to open Egypt to the newcomers and to incorporate the new energies in the old system. That was what the Ptolemies achieved in the way of systematizing and perfecting the old Egyptian administrative and economic system. It would be

unjust to affirm that the chief aim of the Ptolemies was to enrich themselves and to rob the population of the whole amount of what they produced. The Ptolemies wanted to have a rich and strong state, and they sacrificed the interests of the individuals to this principle. They did not want to be unjust and to make their subjects unhappy. It would be a very interesting task to analyse all that the Ptolemies themselves and the officials who repeated their exhortations expressed in their edicts and ordinances as to their aims and principles. I am sure that such an analysis would show how far-reaching was the influence of Stoic and Cynic ideas on the rulers of Egypt, quite as extensive as the influence of those ideas on Antigonus Gonatas. The view that the ruler was the servant of his subjects was quite familiar to the Ptolemies, and the teaching of Horace in his Roman odes concerning the duties of honest officials in the new state created by Augustus differ but little from the instructions of the Ptolemies to local officials, which inculcated honesty, justice, punctuality and energy. See Plut. *Apophth.* reg. 189D: Δημήτριος ὁ Φαληρεὺς Πτολεμαίῳ τῷ βασιλεῖ παρήγει τὰ περὶ βασιλείας καὶ ἡγεμονίας βιβλία κτᾶσθαι καὶ ἀναγιγνώσκειν· “ἃ γὰρ οἱ φίλοι τοῖς βασιλεῦσι οὐ θαρροῦσι παρανεῖν, ταῦτα ἐν τοῖς βιβλίοις γέγραπται,” and cf. Lumbroso, *Bull. de la Soc. Arch. d’Alex.*, 14, 151 foll.; Tarn, *Antigonos Gonatas*, 254 foll. It is to be noted that the treatises about *Βασιλεία* were generally Stoic or Cynic in tendency.

I have but little doubt that the first results achieved by the Ptolemies were splendid, and believe firmly in the popularity of the first three Ptolemies among the population of Egypt. But the system as such was very dangerous, and led directly to the results that I have explained in the text of my article.

2. *Agriculture.* I will not repeat what I have stated in my book, *Studien zur Geschichte des römischen Kolonates*, Leipzig, 1910. The main points of my account of the agrarian relations between the State and private individuals are generally accepted. New papyrological evidence, as e.g. an important papyrus in the British Museum which will soon be published by Grenfell, shows that the treatment of granted land in the Thebais, to which the papyrus belongs, and in the Fayûm presents no important differences, and that crown land in the Thebais formed a large part of the territory of that region. But the question in general is very complicated and difficult, and a definitive statement would be possible only in the case of another discovery like that of Tebtynis, i.e. the discovery of a large number of documents describing the agrarian state of the Delta¹, Middle Egypt, or the Thebais. The practice of giving up state land and assigning it to different holders is older than the Ptolemies, being found constantly under the old Egyptian kingship. The Ptolemies resumed this practice chiefly in order to bind to themselves the foreign elements in the country. But gradually they relapsed into the dangerous methods of the Pharaohs, and came back to conditions which seemed to have been totally destroyed by the first Ptolemies. By granting land to the temples and to some eminent officials they restored the power of the priests and of local-feudal chiefs. But this development was checked by the strong hand of Augustus.

3. *Cattle.* The division into γῇ βασιλικῇ and γῇ ἐν ἀφέσει (crown- and granted-land) is typical for the whole condition of economic life in Egypt. In every branch of agricultural life we see the State or the king as the greatest employer and as owner of the most important concerns. Private initiative was only subsidiary. So e.g. in the treatment of the cattle, the State was owner of large herds of different kinds of cattle. It was enabled to hold these by the ownership of the whole pasture-land—*νομαί*. This ownership is shown by the payment of a tax (*ἐννόμιον*) for the use of *νομαί*: see lately P. Ryl. II, pp. 314 foll. How the State managed these herds is not quite clear and requires a special inquiry which cannot be undertaken here. But I must point out that special attention was paid by the Ptolemies to cattle and other animals needed by the State for administrative, military, and religious purposes. To feed the court and the officials large flocks of geese and swine were kept. The *χρηνοβοσκοί* and *ὑποφορβοί* who took care of these were in the position of *βασιλικοὶ γεωργοί* and workmen in the state-factories (*ὑποτελείς*); see Tebt. 5, 168, and cf. P. Petr. II, 10, 1=III, 32a; 107e; 112a II, 5; c, 12; d I, 9; e verso 26; g IV, 24; PSI. IV, 379; v, 534; Wilcken, *Grundz.* 248; Oertel, *Liturgie*, 25. I cannot agree with Wilcken, who thinks that

¹ Very important documents from Mendes in the Delta have been published lately by V. Martin, *Un document administratif du nome de Mendès*, in C. Wessely, *Studien zur Palaeographie und Papyruskunde*, xvii (1917). Though belonging to the IIIrd cent. A.D., this document (enumeration of the unwatered land, γῇ ἄβροχος), which preserves the old terminology, gives valuable evidence on the conditions of land-tenure in the Ptolemaic period. It is to be noted, however, that no general conclusions may be drawn from this document as regards the general distribution of land in the Delta. Though the document enumerates only parcels of private land chiefly held formerly by soldiers, it may be supposed that this exclusiveness is caused by the fact that such land only was registered in this document, other categories being booked separately.

χρηνοβοσκοί were farmers of geese belonging to the State. Oertel did not understand their position at all ; to speak about requisitions from the *χρηνοβοσκοί* is entirely inappropriate. Another large concern of the State was horse-breeding, chiefly for military purposes. Horses were always scarce in Egypt, where asses, bulls, cows, and camels were used for the transport and for agricultural work. Large *ἵπποτρόφια* belonged exclusively to the State, and were administered by *ἵπποτρόφοι*, whose position can be defined only by a special inquiry, but who seem to be nearer to officials than to *ὑποτελείς* : see P. Hib. 162 and 118 ; PSI. iv, 405 ; P. Petr. III, 62 c. Very complicated also is the question about *μοσχοτρόφια*, which are often combined with *ἵπποτρόφια*. No doubt they also belonged to the State and were destined to provide calves for sacrifices. Fresh evidence about the *μοσχοτρόφια* and *ἵπποτρόφια* is provided by the new Tebtynis papyri, where the whole evidence will be discussed. But it would be wrong to affirm that the State claimed a monopoly in the ownership of geese, swine, horses, and calves as well as bees (which were very important since honey was the only substitute for sugar), for private owners of them are very often mentioned. Most attention was paid by the State to draught-cattle indispensable for agricultural work. A special inquiry only can ascertain how this matter was treated by the State. But it is certain that the draught-cattle were most carefully registered (see P. Petrie, III, 98 ; *cf.* 94 b and c ; 101), and elaborate measures were taken to distribute the whole amount of cattle owned by the *βασιλικοὶ γεωργοί* during the season of work on the land, especially at the time of ploughing and gathering of the harvest. To supply the necessary draught-cattle in places where they were particularly needed state-owned cattle were first of all available. Large herds of bulls were entirely owned by the State ; see *e.g.* Petrie, III, 62 c. At critical moments the whole amount of cattle in the country was mobilised and distributed, the cattle of the *βασιλικοὶ γεωργοί* as well as that of private land-holders (P. Paris, 63, 173 foll.). But in ordinary times the problem was to distribute rationally the available cattle belonging to the *βασιλικοὶ γεωργοί* : see the correspondence of Zenon, P. Hamb. 27, 13 ; PSI. iv, 429, 25 ; 422 (a very important document) ; v, 497, 482 ; P. Lille, 8 ; *cf.* P. Alex. 1 (Wilcken, *Chrest.* 198 and 241) and P. Tebt. 5, 178, where officials are forbidden to requisition cattle for their private use. Another important problem was to combine the requirements of agricultural work with the needs of State-transport of corn to the landing places where the corn was loaded on ships to be carried to Alexandria, Memphis, Thebes and other places. Preference was generally given to agricultural needs ; see P. Tebt. 705 ; *cf.* 750, 753, 757. The technical term for cattle employed in agriculture is *γεωργικὰ κτήνη*, for cattle used for the transport—*πορεία*.

4. *Hay and green food.* In close connection with the distribution of draught-cattle for agricultural work, which was in fact a pure negation of the right of the agriculturists to dispose freely of their own cattle, stand the strong measures taken by the State to guarantee for the state-cattle and the *γεωργικὰ κτήνη* of the *βασιλικοὶ γεωργοί* the necessary amount of green-stuffs. I have mentioned already the ownership of the State over the whole unsown pasture-land (*νομαί*). There is no available evidence to show whether, besides the State, private persons in the Ptolemaic epoch owned or disposed of large tracts of pasture-land. But very full evidence exists about pasture-land owned by the State. Under this head was included all unsown land, whether swamps or meadows or fallow-land. It was used chiefly for the large flocks of sheep and goats which were owned partly by the State, partly by *ποιμένες* (large employers, disposing sometimes of many hundreds of cattle) ; see the careful study by Johnson and Martin already mentioned, P. RyI. II, 314 foll. For the right of pasture a tax was paid upon each head of cattle (*ἐννόμιον*) ; so that the whole amount of cattle in the country had to be carefully registered. Besides the *ἐννόμιον*, the cattle-owners had to pay special taxes for each head of cattle of every kind ; see P. Hib. 33 ; P. Petrie, III, 72 b, 73 d (registration) ; *ibid.* 109 (note on p. 274) ; P. Amh. II, 83 ; PSI. iv, 368, 386 ; v, 509 (*ἐννόμιον* combined with *φυλακτικόν* ; the tax was farmed, and the farmers or the State had to provide a large number of guards paid out of the proceeds of the tax) ; PSI. iv, 351, 361, 380 (the practice of distribution of the *νομαί*).

The state-owned cattle and the *γεωργικὰ κτήνη* were fed partly on these *νομαί*, partly by green-stuffs—the so-called *χλωρά*. After the harvest, large tracts of land were sown with different kinds of green-stuffs. The disposal of these was not free to agriculturists. They had the right to feed with it agricultural cattle only, and this only after having given securities (*ἀσφάλεια*) for payment to the Government of an *ἐκφόριον* and for repayment of the *σπέρματα*. Since the payment had to be effected generally in money or in corn, a valuation of the crops (*συντίμησις χλωρῶν*) preceded the permission to give the green-stuffs to the cattle or to bring it home ; see P. Tebt. 27, 54 foll. ; P. Hib. 51—53 and 75 ; P. Gradenwitz 8 ; *cf.* Piotrowicz, *Eos*, 1913, 11 foll. and P. Petrie, III, 21 (*συντίμησις χλωρῶν*). New evidence is found in PSI. II. 372 and 400 ; *cf.* v,

510, 7 and P. Tebt. 714, 715. It is to be noted that the rules for the use of *χλωρά* or *ἐπίσπορα* were obligatory for both the *γῆ βασιλική* and the *γῆ ἐν ἀφέσει*, and that persons breaking the rule were liable to have their cattle confiscated (*ὑπὸ στέρησιν ἄγεσθαι*); see P. Tebt. 27, 54 foll. and 70 foll.

The treatment of the cattle owned by private persons is typical of the policy of control adopted everywhere by the State in Egypt. It is hardly possible to affirm that in practice there were really private owners of cattle in Egypt at all. We must remember that besides the above-mentioned restrictions, the State appealed to cattle-holders to carry out the already mentioned transport of state-goods, demanded private cattle to organize the maintenance of canals and embankments, requisitioned from private owners pigs and fowls to feed the Court and the officials, and calves for sacrifices, and finally reserved probably for itself the right to buy the whole amount of wool produced by sheep and goats.

5. *Control of crops.* I cannot give here the evidence to show how state-control worked in other branches of agricultural economy, but I shall produce in my commentary to P. Tebt. 703 the evidence for the state-control of yearly crops; see meanwhile Pauly-Wissowa, *Real. Enc.* VII, 134 and 161. I have no doubt that the State prescribed to the agriculturists how much land was to be sown with corn, how much with oil-plants, etc. Though it is not clear whether these regulations referred to the *βασιλικοὶ γεωργοί* only or to the holders of the *γῆ ἐν ἀφέσει* too, I am rather inclined to believe that certain restrictions were imposed upon the second category of land-holders.

A few words may be said also on two points which have not yet been fully illustrated in previous discussions of the agricultural life of Egypt. I mean the compulsory sale of corn to the State, and the rules about tree-planting and tree-cutting.

6. *Σίτος ἀγοραστός.* This is well known to all papyrologists. Besides the *ἐκφόρια* and the taxes paid in corn, agriculturists had to sell a certain amount of their corn at fixed prices; see Wilcken, *Grundz.* 357. I should suggest that this obligation lay chiefly on, not the *βασιλικοὶ γεωργοί*, but the holders of *γῆ ἐν ἀφέσει*, especially the *κληροῦχοι*. It was a kind of substitute for their immunity from *ἐκφόρια*, a kind of supplementary taxation in a milder form. Besides the papyri quoted by Wilcken, I should refer to Tebt. 5, 178 foll., esp. 184: *μηδὲ οἰνικά | ἢ σιτικά γενήματα ἐπρίπτειν τιμῆς*; cf. 194, where it is forbidden to demand more than usual for sale from the agriculturists. See also P. Hib. 40; 47, 14 foll. and Edgar, *Annales du Serv. des Antiq.*, XVIII (1918), I, p. 162, where I understand the *βασιλικὸς σίτος* to be, not corn given by the State to the soldier as allowance, but corn bought by the State from the *κληροῦχος*.

7. *Tree-planting.* The evidence about tree-planting will be discussed in my commentary to Tebt. 703. I would like here to draw attention to a passage in Tebt. 5 which has not been rightly interpreted—ll. 200 foll.: *ὁμοίως δὲ καὶ τοὺς βα(σιλικοὺς) γεω(ργοὺς) καὶ τοῦ[ς ἱερεῖς] καὶ τοὺς ἄλλους | τοὺς τὴν ἐν ἀφέσει γῆν ἔχ[οντας καὶ] μὴ | καταπεφ(υτ)ευκότας τὰς καθη[κ(ούσας) φυτ(είας)] | ἕως τοῦ να (ἔτους) τῶν ἐξακολουθούντων προστίμων | τὴν δὲ φυτεῖαν ποιέσθαι ἀπὸ τοῦ νβ (ἔτους). καὶ τοὺς κεκοφώτας τῶν ἰδίων ξύλα παρὰ (τὰ) ἐκ(κ)είμενα | προστάγματα.*

It is clear from the context that the planting mentioned in the text quoted above refers not to some crops, but to trees, and that consequently the holders of *γῆ βασιλική* and *γῆ ἐν ἀφέσει* were obliged to plant some land with trees. On the other hand, we see that even the trees growing on their own land could not be cut by the owners without certain formalities ordered in special *προστάγματα*. One of these *προστάγματα* is preserved in an inscription of the II—I cent. B.C.; see Preisigke, *S. B.* 4626. Though fragmentary, the contents of this *πρόσταγμα* are clear. It contained an order concerning planting trees on the embankments, and a prohibition to cut trees already growing on them. More details are given by Tebt. 703; cf. PSI. IV, 382. I think that the often-mentioned *ξύλοκοπία* belongs in some cases to the cutting off of branches of state-trees growing on the embankments, and used generally for the embankments themselves; see e.g. P. Petrie, III, 39; 43, 2 and IV, 10; 48, 4. The land planted with trees is perhaps the *ξύλιτις γῆ*; cf. P. Petrie, II, 39 (α), 7=III, 88. On the *ξύλοκοπία* in Ptolemaic times, see PSI. IV-V, 323, 338, 339, 429, 499, 506 comp. 501, 545, and P. Lille, 5, 24; for Roman times see Wilcken, *Grundz.* 253; *Archiv*, I, 127; cf. P. Oxy. 1112, 1188 and 1421.

8. *Industry.* No comprehensive work on industry and trade in the Hellenistic period exists. The book of Reil (*Beiträge zur Kenntnis des Gewerbes*) is more a useful inventory of facts than a full inquiry into the subject. The article on Greek industry and trade in one of the last volumes of Pauly-Wissowa-Kroll, *Real. Enc.* is disappointing. The author, Francotte, gives a careful study of the industry and trade of the Greek *polis*, but does not deal at all with industry and trade in the Hellenistic monarchies. With regard

to Roman industry, Gummerus in his excellent article on industry and trade in Italy and the Western provinces in the above-mentioned Encyclopaedia and in some articles in the *Jahrbuch* of the German Arch. Institute, has paid but little attention to Egypt and to the Hellenistic world in Roman times. Papyrologists, however, have produced many valuable special studies on the subject, references to which will be found in the above-mentioned Introductions by Wilcken and Schubart, who have themselves supplied good general sketches on industry and trade in Greek and Roman Egypt. To the list of special works on the subject given by them, I would join a reference to the recently published book of M. Chwostoff (in Russian) on the textile industry in Egypt (M. Chwostoff, *Sketches on the organization of industry and trade in Greek and Roman Egypt*. 1. *The textile industry in Greek and Roman Egypt*. Kazan, 1914).

My attempt to give a classification of the different methods of organizing industry and trade is based partly on the above-mentioned studies, partly on fresh evidence. Though the lines of demarcation which I have drawn are rather rough and approximative, the future will perhaps render it possible to draw them more definitely, and to subdivide my types into more classes and categories. But I hope that my leading principle in defining the categories may be useful to future students of the subject. To illustrate my classification by a few examples, I add some short notes on the best-known and most typical branches of industry.

A classic example of the first category—the *full monopoly*—is the state-monopoly of oils, thoroughly studied by Grenfell in his commentary to the νόμοι τελωνικοί of Ptolemy Philadelphus. We meet here all the peculiarities of a modern monopolized branch of industry: nationalization of raw products, distribution of these among state-factories, nationalization of all the factories, compulsory labour in them, nationalization of products obtained in the factories, and full monopoly of trade with strong measures taken against illicit traders; finally, heavy taxes on imported oils and restriction of trade in them.

A milder form of organization was found in the *textile industry*. The documents concerning it are not so full as those dealing with the oil monopoly, but we can affirm with certainty that no full monopoly was introduced into the textile industry. It must be noted to begin with that in the textile industry we cannot trace any big factories, the single looms being scattered through the country in towns, villages and temples. Some of them stood in close relations to temples (Rosetta Stone, Dittenberger, *Or. Gr. Inscr.* 90, 17 and 29; P. Tebt. 5, 245 foll.), others to big land-owners (PSI. iv, 341), but that seems to have had no influence on the organization of this branch of industry by the State. Priests and estate-owners played apparently the same part as the farmers of ὀθονηρά, receiving a part of the product and being responsible for the payment of the weavers.

The main outlines of the organization of the weaving industry were as follows. Possibly raw materials were dealt with by the State in the same way as in the oil monopoly (*Rev. Laws*, col. 86 foll.); but the weaving-loom was not nationalized and remained the property of the weavers—property of course within limits, because the owners were not permitted to dispose freely of it, e.g. to sell the looms, or to make any repairs in them, without a special permit (P. Tebt. 5, 241 f.; P. Magd. 36 = Chr.). Nevertheless the textile-workshops were not owned by the State like the oil factories. They remained in the hands of the textile-workers, and the implements belonging to them were treated by the State on the same lines as the agricultural implements of the βασιλικοὶ γεωργοί (P. Tebt. 5). Though the textile-workers were in no sense free artisans, working for themselves and disposing freely of the products of their work, they were in a better position than the workers in oil factories. They obtained of course raw materials from the State, they were bound (by contracts?) to deliver a fixed amount of clothes of prescribed kinds, they were responsible for arrears in the delivery, and were not allowed to go away from their homes; but, on the other hand, they were not obliged to make use of all their looms, and we have no evidence of compulsory work exacted from them. They worked as much as they liked within the limits of the above-mentioned contract, and were remunerated for the clothes which they delivered in money at a prescribed rate fixed by the State (P. Hib. 68, 69). It is not quite clear whether they had to deliver all that they produced, or possessed the right to manufacture—in addition to what they were ordered—clothes for their own use or for sale. It is possible that the State did not carry the idea of nationalization to extremes, and allowed the owners of textile implements to work not only for the State but also for themselves. But I am inclined to think that they did not have the right of free sale in regard to their work. The exclusive right of sale belonged probably to local dealers, who were allowed to deal with the state-products, and were treated by the State like tax-farmers (*Rev. Laws*, col. 91). More details about the textile industry may be found in my commentary to Tebt. 703, which supplies new and valuable information on the subject.

A clear and typical instance of a branch of industry controlled, but not at any rate monopolized, by the State may be seen in the management of *hunting* and *fishing*. I cannot deal with the matter at length; but briefly the organization was as follows. Hunting was not free in Egypt. The State farmed out the right of hunting both on the Nile and in the desert. The farmers were allowed to retain a part of the produce. This involved the necessity of conferring these rights chiefly upon special bodies of hunters (*κυνηγοί*), who were in my opinion another kind of *ἐποτελεῖς*. Sometimes hunting was permitted to soldiers on an expedition, but always under the condition of paying the prescribed rate to the tax-farmers; see P. Meyer, *Klio*, xv (1918), 376; P. Ryl. II, 98; PSI. v. 458; *cf.* for Roman times P. Ryl. II, 98a and App. p. 423, and concerning the bodies of *κυνηγοί* the inscriptions on the cliffs near Panopolis *S. B.* 235–291 and 293, 294.

Fishing was organized on the same lines. The tax was fixed at 25% of the produce, levied by tax-farmers. Possibly the right of tax-farmers to receive the fourth of the produce did not alter certain rights of temples and villages to fish and to hunt at different spots on the Nile and on the lakes. I do not believe that the whole produce of fishing had to be delivered to the farmers and was sold by dealers appointed by the State (Grenfell-Hunt, *Tebt.* I, p. 49); but I am sure that trade in fish was controlled by the State, and the dealers had to pay a special tax; the *τέλος μεταβάλων ἀλιέων*, Wilcken, *Ostr.* I, 136, § 6. The most important document on fishing is Wilcken, *Chr.* 167 (131 B.C.); *cf. Grundz.* 352; *Ostr.* I, 137. There is also much new evidence in *Tebt.* III.

The organization of fishing and hunting, as sketched above, affords a good illustration of State-control over every branch of trade and industry. Every party of hunters or fishermen was followed by agents of the tax-farmers, and every piece of game or fish caught was carefully registered by this tax-spy.

It is important to point out that the state-regulation of industrial life in Egypt stood in close connection with similar regulation of *trade*. I cannot deal with this point at length; but I can affirm that the whole internal trade of Egypt was under close control by the State. Most of the products of Egypt were sold at fixed prices by dealers appointed by the State; in some branches of commerce prices were not fixed, but the State watched carefully over these branches, asked the producers and dealers to fix the prices by themselves, and then levied for the State a part of their profits. Details on this subject will be given in my commentary to *Tebt.* 703, which provides important evidence on the subject. A very good instance is PSI. IV, 425, where the existence of careful regulations for the corn-trade must be supposed, these being very similar to those for the wine-trade. Apparently the State gave to some dealers the exclusive right to sell corn belonging to the State. Possibly the corn dealt with was the *ἀγοαστὸς σῖτος*; see above p. 175.

9. *Administrative system.* No good comprehensive work on the administrative system of Ptolemaic Egypt exists. The outlines are fixed, *e.g.* by Bouché-Leclercq, but many questions remain unsettled. One of the most important is that concerning the functions of *οἰκονόμος*. The recent work by Steiner (*Der Fiskus der Ptolemäer*, 1914) has confused the matter instead of elucidating it. No help is to be obtained from the recent investigations of Preisigke¹ and Oertel (see further below). The careful investigation of the Zeno-correspondence (the whole find is divided between Italy, Cairo, England and Germany) combined with a renewed study of the Tebtynis, Hibeh, Petrie and Paris papyri will certainly throw fresh light on the duties of the *οἰκονόμος*. Though Zeno in the second period of his life was certainly not the *οἰκονόμος* of the Arsinoite nome, he had in his quality of chief manager of the big estate of the dioecetes Apollonios very often to deal with different local officials, especially with the *οἰκονόμος*.

It is a pity that the careful study of Oertel (*Die Liturgie*, 1917), useful as it is for the Roman times, does not clear up the question of the so-called liturgy in Ptolemaic Egypt. He fails to recognize that the Greek liturgy closely connected with the city state has nothing to do with the compulsory labour of Eastern monarchies. What is new in the Ptolemaic system is the combination of compulsory work with administrative duties, which is noticeable first of all in the case of the different kinds of guards. This combination is peculiar to Egypt, and developed widely in Roman times. The municipalization of Egypt in the IIIrd cent. of the Christian era first brought together the Greek municipal liturgy and the compulsory administrative work of Ptolemaic and Roman Egypt.

Compulsory tax-farming is different. It has nothing to do with the Greek liturgy, and is due to the fact that tax-farming and administrative service approached nearer and nearer to each other as time went on. In the Roman period it is sometimes difficult to discover where the tax-farmer ends and the official begins.

¹ F. Preisigke, "Die Prinz-Joachim Ostraka" (*Schr. der Wissenschaftlichen Gesellschaft in Strassburg*, 19), Strassburg, 1914, pp. 52 foll.

Entirely apart from the foregoing stand the different categories of compulsory manual work for the State. In dealing with this matter it is necessary to avoid the word *liturgy* sometimes used by the Greeks in Egypt to design compulsory work in general. The similarity of this compulsory work to the compulsory work of citizens demanded sometimes by the city is only superficial; for the two institutions are based on quite different foundations.

10. *The spirit of the nation.* The most difficult task in historical investigations is always that of characterizing the spirit of an epoch, the mood of a nation. It is always a piece of guess-work and therefore subjective. My characterization of the psychology of an average Egyptian is based primarily on the contents of ordinary letters written by one hellenized Egyptian to another, mostly family letters. The matters dealt with in these are chiefly economic or of a family character. But I must acknowledge that this foundation for my deductions is rather weak. It is not certain what would be the result if we were to analyse in the same way some hundreds of letters mostly written by country-people and local officials of our time.

To corroborate my statement we have, however, some very characteristic facts. First of all the *strikes*. To show discontent through strikes was always customary in Egypt among a population working under constraint. It is the usual protest of an enslaved population. The fact that the régime of the Ptolemies did not put an end to this form of protest, but that under these strikes became quite regular, shows that the mood of the population did not change and the general conditions were unaltered. It is to be noted that our evidence about strikes is not confined to the later Hellenistic times. To judge by the available evidence strikes were as usual in the IIIrd cent. B.C. as in the second and first. We find from the beginning an elaborate technical language used by the strikers and the officials dealing with them: *ὑπόπτως σχεῖν* expresses the mood of the workmen showing that they were ready to strike; *ἀναχωρεῖν* or *ἀποδιδράσκειν*—to leave work and to look for a refuge—is the technical expression for the strike itself, etc. Different classes of the population go on strike: *βασιλικοὶ γεωργοί* (Tebt. 26, 18 and 41, 14; PSI. v, 502)—workmen in quarries (*λατόμοι*: Hib. 71, 6), guards of different categories (*γενηματοφύλακες*, *χωματοφύλακες*, etc.; PSI. iv, 421; v, 490; Tebt. 24, 34 and 52; 731), retail-dealers in wine (Tebt. 725, etc.). I will quote one characteristic passage to show how common strikes were, and how ready even the officials were to use this weapon against the State,—PSI. iv, 421, 6: *ἔτε | δεῶν γε πλήρης ἐστὶ. ὥστε εἰ | μὲν διδοῖς ἡμῖν (supply καλῶς ἐστὶν)· εἰ δὲ μὴ, ἀποδραμούμεθα· οὐ γὰρ ἰσχύομεν.*

In times of unrest and open revolt, and especially after the suppression of a revolt, the plight of the population was general, and *amnesty*-decrees were bound first of all to call upon the *ἀνακεχωρηκότα σώματα* to go back to their homes and work; see Tebt. 5, 6 foll. (Euergetes II); P. Par. 63, col. 13, l. 2—4 (Philometar); Dittenberger, *Or. Gr. Inscr.* 116; cf. Holleaux, *Arch. f. Pap.* vi, p. 10 B and p. 17 n. 1.

The growth of the number of *ἀνακεχωρηκότα σώματα* is shown by the increasing number of sanctuaries which possessed the right of *ἀσυλία* during the Ist cent. B.C. The State was too weak to repel the claims of *ἀσυλία* presented by bodies of priests or influential officials. One decayed sanctuary after another was restored by priests or private persons, and received from the king the right to hide the strikers and exploit their labour for their own purposes. The old feudal principle arose again, and the foundations of the “patrocinium” of private landlords and churches in the late Roman period were laid. Not less than seven inscriptions, all of the Ist cent. B.C., give us evidence about this right of *ἀσυλία* granted to different small sanctuaries, while for the IIIrd and IVth centuries we have no examples. See *S. B.* 620 (Athribis 97/6 B.C.); *S. B.* 1161 (Theadelphia, 58/7 B.C.); Breccia, *Bull. de la Soc. Arch. d’Alex.* 15 (1914—1915) (Theadelphia, 70/69 B.C.); *S. B.* 5219 (Euhemeria, 69/8 B.C.); *S. B.* 5827 (Euhemeria, 69 B.C.); *S. B.* 3926 (Ptolemais Hermiu, 76/75 B.C.); Jouguet, *C. R. de l’Acad. d. Inscr.* 1902, 359 (Magdola).